REMARKS

Claims 7-15 remain in this application. Claims 7, 9, 10 and 12-15 are amended to obviate the double patenting rejection set out in the Office Action under reply.

It is respectfully submitted, the rejection of the claims on the ground of statutory double patenting in view of U.S. Patents 6,418,167 and 6,661,843 is unwarranted and should be withdrawn. As is clear from MPEP § 804, a statutory double patenting rejection is proper only when the **same invention** is being claimed in an application as was claimed in a prior patent. Here, the claims of the present application all are directed to methods. None of the claims of the '167 and '843 patents include method claims. Therefore, the same invention is not being claimed in the instant application as was claimed in the prior patents. For this reason, the double patenting rejection should be withdrawn. Nevertheless, the amendments made herein render the double patenting rejection moot.

In the Office Action under reply, claims 7 and 12-13 were rejected as being anticipated by U.S. Patent 5,805,224 (Keesman). Claims 8-11 and 14-15 were rejected as being obvious in view of the combination of Keesman and U.S. Patent 4,979,037 (Mizutani). For the reasons now discussed, it is respectfully submitted that Keesman, whether taken alone or in combination with Mizutani, fails to suggest features recited by Applicants' claims; and the rejections of claims 7-15 in view of prior art should be withdrawn.

Claims 7 and 12-14 are directed to a compression method for moving picture information, and particularly, to a method for compressing a picture that previously had been compressed, then expanded, and now supplied for yet another compression operation. The purpose of the present invention is to obviate, or at least minimize, distortion occasioned by successive compression/expansion/compression, etc. The environment for carrying out the

method of claims 7 and 12-14 is specifically recited as: "for compressing a previously expanded picture signal that is supplied with a motion vector obtained in a prior compression of that picture signal." While Keesman mentions a transcoding structure with a classical decoder and encoder, with the decoder using motion vectors which may be reused in the encoder (column 2, lines 15-20), he is not concerned with avoiding distortion caused by successive encoding/decoding/encoding, as in applicants' invention.

Claims 7 and 12-14 point out that the motion vector obtained in prior compression is supplied with the previously expanded picture signal and is presented with that previously expanded picture signal for subsequent compression. Keesman, at column 2, lines 15-20, does not provide, with a picture signal presented for encoding, the very same motion vector that had been obtained in a previous encoding operation of that picture signal.

Claims 7 and 12-14 call for inputting or receiving the previously expanded picture signal along with the motion vector supplied with that previously expanded picture signal. This inputted or received motion vector is separated from the previously expanded picture signal that is supplied. In the Office Action under reply, Fig. 2 and especially column 6, lines 60-63 of Keesman were relied upon as teaching the separation of a motion vector from the moving picture signal. However, Fig. 2 of Keesman illustrates a decoder 201 and an encoder 202, with the input picture signal being supplied to the decoder. There is no description that encoder 202 receives a motion vector produced in a prior decoding or encoding process. Moreover, encoder 202 uses a motion estimator 29 to produce the motion vector from the picture signal supplied to the encoder. Indeed, there is nothing present in encoder 202 or, for that matter, in decoder 201 of Keesman that functions to separate a supplied motion vector. It is respectfully submitted, there is no supplied motion vector for Keesman to separate. Demultiplexer 211 in decoder 201 separates the incoming bit stream into a coefficient bit stream q_2 and an overhead bit stream v_2. Neither of

these bit streams is described as a motion vector. Hence, there is no motion vector for Keesman to separate.

With respect to applicants' claim 7, this claim calls for dequantizing the separated quantized motion vector. In Fig. 2 of Keesman, element 25 (Q^{-1}) was relied upon as performing such a dequantizing operation. But, element 25 operates to dequantize the transform coefficients which, of course, are not separated motion vectors.

With respect to applicants' claim 12, the foregoing arguments with respect to Keesman are repeated and incorporated herein as they relate to the same elements found in claim 12 that are recited in claim 7. Claim 12 additionally calls for receiving with the previously expanded moving picture signal the motion vector that was used for expanding that picture signal, which was the very same motion vector that was produced during the prior compression of that picture signal. Keesman, Fig. 2, was relied upon to teach this feature, and the Office Action explained that Keesman's decoder outputs the expanded picture signal. However, there is no suggestion in Keesman of outputting from decoder 201 or from decoding device 212 the motion vector that had been used to encode the picture signal supplied to decoder 201. As mentioned above, if there is a motion vector multiplexed with the input signal supplied to Keesman's decoder 201, there is no suggestion that this motion vector is separated from that input signal. Applicants' representative repeats, the only description of a motion vector associated with Keesman's encoder 202 is Keesman's motion estimator 29 which generates a new motion vector -- it does not separate the non-existence motion vector from the received previously expanded picture signal.

Claim 12 further calls for the step of compressing the received expanded motion picture signal using the separated motion vector. While the Examiner is correct in noting that encoder 202 in Keesman's Fig. 2 performs compression, there is no suggestion that

compression should be performed with the motion vector that is separated from the received expanded motion picture signal. This is not surprising, especially since Keesman does not separate a motion vector from the received expanded motion picture signal. Rather, Keesman generates a new motion vector in his motion estimator 29 -- and this is not the same as separating a received motion vector that had been obtained in a prior compression and that had been used to produce the expanded motion picture signal that is received. The obvious reason Keesman uses motion estimator 29 is, but for that motion estimator, there is no received motion vector available for compression. Keesman suffers from the very problem that is addressed by applicants' invention.

Claim 13 is similar to claim 12 and additionally calls for detecting, from the received motion picture signal that has been stripped of its motion vector, "a new motion vector in the neighborhood of the separated motion vector." This new motion vector is used to compress the received expanded motion picture signal. Keesman has no received motion vector to strip from the decoded picture signal supplied to encoder 202. Nor does Keesman detect a motion vector in the neighborhood of the separated motion vector.

Claim 14 was rejected as being obvious in view of the combination of Keesman and Mizutani. Mizutani was relied upon for describing the multiplexing of a motion vector signal in the vertical blanking period of a video signal. Notably, however, Mizutani is silent with respect to receiving a previously expanded picture signal that is supplied along with the motion vector that had been obtained in the prior compression of that picture signal. Thus, and with respect to the elements recited by claim 14, Mizutani suffers from the same deficiencies as Keesman and, therefore, cannot cure this omission in Keesman. That Mizutani suggests the multiplexing of a motion vector in the vertical blanking interval does not enable one of ordinary skill in the art to modify Keesman to the extent that a motion vector produced in a prior

compression operation should accompany the expansion of the compressed picture signal and be separated therefrom before further compression and expansion operations are carried out, yet, when repeated compression and expansion operations are performed, a new motion vector in the neighborhood of that separated motion vector should be used to perform those subsequent, repeated operations.

Therefore, in view of the significant differences between Keesman, whether taken alone or combined with Mizutani, and the recitations of applicants' claims 7 and 12-14, the rejections of these claims should be withdrawn; and these claims should be found in condition for allowance.

Claims 9, 10 and 15 are independent claims directed to a moving picture expansion method. In the office action under reply, Keesman and Mizutani were combined to reject these claims. Presumably, Keesman's decoder 201 and decoding device 212 are being relied upon as operating in a manner corresponding to applicants' claimed expansion method. Applicants' claims call for expanding the compressed motion picture signal "that is supplied with a motion vector obtained in prior compression of that picture signal." There is no description in Keesman that his decoder and decoding device are supplied with a motion vector that had been produced during a prior compression of the picture signal supplied to decoder 201. It follows, then, that there is no motion vector for Keesman to separate. Consequently, there is no separated motion vector for Keesman to use to decode the picture signal that he received. Finally, there is no suggestion in Keesman to multiplex his decoded picture signal with the non-existent motion vector that he fails to separate from his received picture signal. Consequently, the combination of Keesman and Mizutani cannot provide sufficient teachings to one of ordinary skill in the art to render obvious the moving picture expansion method defined by applicants' claims 9, 10 and 15.

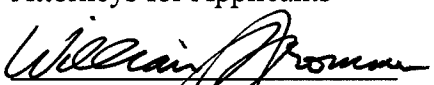
Therefore, since the prior art is not suggestive of the method defined by applicants' claims, it is respectfully submitted that claims 9, 10 and 15 are unobvious, that the rejection of these claims should be withdrawn and that these claims should be found in condition for allowance.

Claim 8 depends from claim 7 and claim 11 depends from claim 10. Since these dependent claims include all of the limitations recited by the respective independent claim from which they depend, claims 8 and 11 are patentably distinct over the combination of Keesman and Mizutani for those reasons discussed above in connection with claims 7 and 10. Accordingly, the withdrawal of the rejection of these dependent claims is respectfully solicited.

Statements appearing above in respect to the disclosures in the cited references represent the present opinions of the undersigned attorney and, in the event the Examiner disagrees with any of such opinions, it is respectfully requested that the Examiner specifically indicate those portions of the references providing the basis for a contrary view.

Please charge any additional fees incurred by reason of this response and not paid herewith to Deposit Account No. 50-0320.

Respectfully submitted,
FROMMER LAWRENCE & HAUG LLP
Attorneys for Applicants

By: 
William S. Frommer
Reg. No. 25,506
(212) 588-0800